

SEMI-HARDWOOD PROPAGATION WORKSHOP

JUNE 29, 2020

The goal of this workshop is for you to learn the technique of making cuttings from woody trees and shrubs and the necessary care for a successful end result: a new tree or shrub. The beauty of cutting propagation is that the new plant is identical to the original, unlike seed reproduction where two parents are involved and the offspring may not be like either parent! Another plus of cutting propagation is that the success rate is much higher than for grafting or budding (other kinds of clone propagation). It also is something the average gardener, if so inclined, can do. We will be propagating stem cuttings. Due to the time of year of our workshop, they will be what is called, "semi-hardwood cuttings". I have selected plants that can be rooted as "semi-hardwood cuttings".

Step #1: Read to learn the proper time to take the cutting of the plant you wish to reproduce. Timing, or the degree of hardness to the wood, is frequently the determining factor in whether your cutting will root or not. Good source for this information is: **The Reference Manual of Woody Plant Propagation** Michael A. Dirr and Charles W. Heuser, Jr. VarsityPress1987 or the handout I have given to you from the Green Scene July, 1976.

Step #2: The cutting is best if taken in the early morning when the plant is well hydrated and turgid. The stems that are to be the cutting should feel like a crisp green bean. Keep stems in a labelled plastic bag with ice.

Step #3: Have your propagation area ready:

- rooting container with drainage holes
- cover for rooting container and with supports for cover if needed
- rooting medium ready and made:
 - 1/2 perlite
 - 1/2 good quality potting soil
- cutting board
- one sided razor
- labels
- planting stick or pencil
- hormone appropriate to cutting (usually #3 for semi-hardwood, #8 for hardwood cuttings such as conifers)

Step #4: Add rooting mixture to container so that it is about 1 1/2" deep.

Step #5: Remove leaves from the bottom half of the stem, which is anywhere from 2-4" long, depending on the plant. Pull leaves off in direction plant grows.

Step #6: If the leaves are large, decrease the size of the leaves by 1/2.

Step #7: Make a long clean angled cut just below the lowest node on the stem. This is where the roots will be forming.

Step #8: For difficult to root plants, a wound is made opposite the angled cut with the sharp edge of the razor.

Step #9: Dip the wounded area and the angled cut in water and then the selected rooting hormone. If there is too much hormone on the cutting, shake a little off.

- Step #10: With a pencil, make a hole in the rooting soil where the cutting will go and firm the cutting in place.
- Step #11: I have found that misery loves company, so I tend to stick a lot of cuttings fairly close together, allowing room for air and growth.
- Step #12: After all cuttings have been stuck, gently water, taking care not to upset them. You may have to firm the soil around some.
- Step #13: Put a cover over the container or cover with a dry cleaner bag supported with chop sticks or a firm straw. Other clear plastic bags will work, but most people have a big dry cleaner bag. The bag for dry cleaned sweaters is usually the best size.
- Step #14: Place the container under lights with bottom heat. Since that is not possible for most people, a morning sun window with a seed starting heat mat works, as will the morning sun window without the heat mat! Care must be taken to prevent too much heat build up in the container.
- Step #15: After a month or so, gently tug on a cutting. If there is any resistance, the cuttings have begun to root. Patience at this point is necessary as you want to wait until the cuttings are well rooted.
- Step #16: When the cuttings seem to be well rooted (sometimes you can see the roots by looking at the bottom of the rooting container.), slowly open the plastic cover over a two week period to gradually acclimatize the cuttings to low humidity.
- Step #17: When the plastic covering has been off the cuttings for about 2 weeks, it is now safe to gently remove the cuttings from the rooting container. Pot up in good potting soil in a pot of the appropriate size—not too big, but big enough to contain the roots and allow for some growth. Keep on a sunny windowsill until the heat goes off in your home, then they can be **slowly** edged into the appropriate amount of sun for that kind of plant. Take great care to allow the plants to adjust to the sunlight. They will sunburn if they are put into the sun too quickly.
- Step #18: Summer over in the appropriate sun and remember to water.
- Step #19: The soil of the new plants should not be allowed to freeze over the first real winter. (In our case that would be the winter of 2020-21.)The best place to keep the new plants is well covered against a house wall in a garage, in a window well covered with leaves, or at the bottom of the outdoor stairs to the basement covered with leaves. Another way to protect your valuable treasures is to place them in leaves, in a styrofoam cooler in the garage or at the bottom of the outdoor stairs.
- Step #20: In all cases, **please remember to water**. The plants are dormant (which is why they can be in the dark of a garage or a cooler) but they still will need water checks.
- Step #21: Some plants may be ready to plant in the garden the first year, but it is best to give the cuttings at least one year or more to mature.